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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/639,674	08/11/2003	Eric Moore	11973-007001	6822

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EXAMINER
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WEI, ZHENG

ART UNIT	PAPER NUMBER
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2192

NOTIFICATION DATE	DELIVERY MODE
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11/26/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/639,674	<b>Applicant(s)</b> MOORE ET AL.	
	<b>Examiner</b> ZHENG WEI	<b>Art Unit</b> 2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/23/2008</u>  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Remarks***

1. This office action is in response to the amendment filed on 08/15/2008.
2. Claims 1 and 26 have been amended.
3. Claim 30 has been added
4. Claims 1-30 remain pending and have been examined.

### ***Information Disclosure Statement***

5. The information disclosure statements filed on 10/23/2008 has been placed in the application file and the information referred to therein has already been considered.

### ***Response to Arguments***

6. Applicant's arguments filed on 08/15/2008, in particular on pages 6-9, have been fully considered but some of them are not persuasive. For example:
  - At page 6-9, Section 102 Rejections, the Applicants' arguments based on the amended claims 1-15 are persuasive. Therefore, the 35 U.S.C. § 102 rejection to claims 1-2 and 5-6 is withdrawn and accordingly the 35 U.S.C. § 103 rejection to claims 3-4, 7-15 and 26-28 is also withdrawn as these claims are dependent claims and computer program product version claims.
  - At page 9, second paragraph, the Applicants submit that the conflict identification and resolution disclosed in Heller, by contrast, does not address

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conflicts based on particular inputs to two rules resulting in contradictory actions, but instead addresses conflicts during rule generation. Moreover, the inputs (patient health data) are not received until after Heller's conflict resolution is complete and the rule package published to a particular user. Therefore, Heller does not disclose or suggest a logical conflict existing when two or more rules receiving the same inputs result in contradictory actions. Thus, Heller does not disclose the logical conflicts of claim 16.

However, the Examiner respectfully disagrees.

As Heller disclosed at paragraph [0020], "step (b) optionally comprises (i) detecting one or more conflicts arising from application of the treatment plan creation rules to the health data, and (ii) resolving the detected conflict or presenting the detected conflicts for resolution by a skilled human...". Heller also discloses an example of implementation of system by detecting and solving the conflicts for medication rules and rules for target value (see for example, paragraph [0086], rules for target values (e.g. in heart failure reach blood pressure below 130/85 mm Hg)). Heller further discloses in some cases the same target value cause different results (see for example, paragraph [0087], "Conflicts are detected and presented for prioritization (e.g. target blood pressure in heart failure is <130/85 mm Hg, but if significant carotid artery stenosis is present will be set at >130/85 mm Hg)"). Therefore, for the same value of blood pressure inputs result in contradictory diagnosis for determining the heart failure or not and thus will result different actions for treatment plan

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(see for example, paragraph [0087-0088]). For the foregoing reasons, Heller does disclose said recited limitations as the Applicants argued.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-15 and 26-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 26:

Claims 1 and 26 recite limitation "a first attribute is used in a conditional expression", but do not particularly point out or define the relationship between "a first attribute" or "a conditional expression" and "attribute nodes" or "condition nodes". Therefore, it is not clear to the Examiner in what the condition for "a first attribute node points to a first condition node" to generate a dependency graph. For the purpose of compact prosecution, the Examiner treats "a first attribute" as --a first attribute associated with the first attribute node--, and treats "a conditional expression" as --a conditional expression associated with the first condition node--.

Claims 2-25, 30 and 27-29:

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Claims 2-25, 30 and 27-29 depend on the claims 1 and 26 respectively.

Therefore, they are also rejected for the same reason as claims 1 and 26.

Claim 30:

Claim 30 recites the limitation "node rank" in line 1. There is insufficient antecedent basis for this limitation in the claim. The Examiner treats "node rank" as --the rank order of the nodes-- which refers back to the node rank as defined in claim 1 at line 11.

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 16-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burke (Burke et al., US 5,423,041) in view of Heller (Heller et al., US 2005/0043965) (now is put in record)

Claim 16:

Burke discloses a method for automating business processes comprising:

- in a computer system, receiving a rule set as a single package (see for example, col.3, line 30, "Sets of rules are organized as rule-sets");

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- determining rule execution sequence conflicts within the rule set (see for example, col.3, lines 33-34, “If multiple rules are satisfied at the same time...”);
- resolving the execution sequence conflicts (see for example, col.3, lines 32-35, “Within a rule-set, an application programmer may assign each rule a priority. If multiple rules are satisfied at the same time, the rule with highest priority is selected for firing.”); and
- generating a sequence of processing logic from the rule set for optimal processing of inputted facts using the resolved logical conflicts (see for example, col.3, lines 36-37, “The inference engine of the rules system executes the match, select, and act phases of the inferencing process.”).

but Burk does not explicitly disclose determining logical conflicts within the rule where a logical conflict exists when two or more rules receiving the same inputs result in contradictory actions and resolving the logical conflicts. However, Heller in the same analogous art of rule based computerized tool for generating a proposed treatment plan of a patient, discloses steps comprising determining logical conflicts within the rule where a logical conflict exists when two or more rules receiving the same inputs result in contradictory actions (see for example, paragraph [0020], “(i) detecting one or more conflicts arising from application of the treatment plan creation rules to the health data” and related descriptions) and resolving the logical conflicts (see for example, paragraph[0020], “(ii) resolving the detected conflicts or presenting the detected conflicts for resolution

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by a skilled human...” and related description; also see paragraph [0086-0088], an example of rules for target value about blood pressure for heart failure).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Heller's logical conflicts detecting and resolving method to Burke's system. One would have been motivated to do so to use automated interactive management to generate correct proposed treatment as suggested by Heller (see for example, ABSTRACT)

Claim 17:

Burke further discloses the method of claim 16, in which resolving comprises determining override conditions in rule collision events (see for example, col.3, lines 32-35, “Within a rule-set, an application programmer may assign each rule a priority. If multiple rules are satisfied at the same time, the rule with highest priority is selected for firing.”).

Claim 18:

Burke also discloses the method of claim 16, in which generating comprises analyzing the rule set with a business logic generation utility optimized for one of a plurality of target programming languages and generating optimized business logic for the selected target programming language (see for example, col.4, lines 22-41, “Step 11 is coding a system of rules”, “In step 13...This translation step is accomplished with a rules compiler” and “In step 14, the rules code is compiled



with a standard C++ compiler to generate object code”).

Claim 20:

Burke also discloses the method of claim 18, in which the target programming language is C++(see for example, col.4, lines 40-41, “In step 14, the rules code is compiled with a standard C++ compiler to generate object code”).

Claim 25:

Burke further discloses the method of claim 18, in which the business logic generation utility's generated processing logic comprises a series of calls to a working memory database to retrieve, manipulate and update data (see for example, col.3, lines 59-61, “During its match phase, the inference engine tests each rule’s premise against the current working memory”, also see col.4, lines 10-12, “These actions may update the working memory by creating new objects and removing old objects.”).

Claims 19 and 21-24:

Burke discloses the method of claim 18, in which the target programming language may be used with other object-oriented programming languages (see for example, col.2, lines 46-68, “Although this description is in terms of C++, the basic concepts of the invention may be used with other object-oriented programming languages”). Therefore, it would have been obvious to one having

ordinary skill in the art at the time the invention was made to use Java, JavaScript, Jython, Visual Basic or C# to do object-oriented programming to implement Burke's method. One would have been motivated to do so to take advantages of object-oriented language as once suggested by Burke (see for example, col.2, lines 51-59, "permits the rule system to operate directly on class instances created with object-oriented language", also see, col.2, line 67, "inheritance of object attributes").

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant's arguments with respect to claims 16-25 rejection have been considered but are not persuasive. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

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calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zheng Wei whose telephone number is (571) 270-1059 and Fax number is (571) 270-2059. The examiner can normally be reached on Monday-Thursday 8:00-15:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is 571- 272-1000.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Z. W./  
Examiner, Art Unit 2192

/Tuan Q. Dam/  
Supervisory Patent Examiner, Art Unit 2192